

## **REMARKS**

### **A. Background**

Claims 2, 6 and 11 were pending in the application at the time of the Office Action. All of the pending claims were rejected as being obvious over cited art. By this response applicant has amended claims 2, 6, and 11. As such, claims 2, 6, and 11 are presented for the Examiner's consideration in light of the following remarks.

### **B. Amendments to the Claims**

Applicant has herein amended claims 2, 6, and 11 to further clarify, more clearly define, and/or broaden the claimed inventions to expedite receiving a notice of allowance. Specifically, claims 2, 6, and 11 have been amended to clarify that the oxygen deficiency has a lower limit of  $10^{-8}$ . This limitation is supported in the application at least by Figure 3 and the corresponding discussion in the specification. In view of the foregoing, applicant submits that the amendments to the claims do not introduce new matter and entry thereof is respectfully requested.

### **C. Examiner Interview**

Applicant would like to thank the Examiner for the courtesy of the telephone interview conducted on September 9, 2009 between the undersigned and the Examiner of record in the present application. A discussion ensued regarding the lack of citation within U.S. Patent No. 6,043,940 to Kamiyama et al. ("*Kamiyama*") regarding oxygen deficiency and what that means. A proposed amendment to the claims setting forth a lower limit to the oxygen deficiency was discussed. The Examiner agreed that adding the lower limit to the claims appears to overcome the *Kamiyama* reference, but stated that he would need to further study the application to make a final determination. As such, no formal agreement was reached during the interview. The proposed amendments are herein included in independent claims 2, 6, and 11.

### **D. Rejections Based on 35 U.S.C. § 103**

Paragraphs 3 and 4 of the Office Action reject claims 2 and 6 under 35 U.S.C. § 103(a) as being obvious over *Kamiyama* in view of an article by Maciolek et al. ("*Maciolek*"). Paragraph 5 of the Office Action rejects claim 11 under 35 USC § 103(a) as being obvious over *Kamiyama* in view of *Maciolek*

of *Maciolek* and further in view of U.S. Patent No. 6,559,084 to Fujikawa et al. ("*Fujikawa*"). Applicant respectfully traverses these rejections.

In the rejection of the pending claims, the Office Action asserts that "absent any teaching from *Kamiyama* ... the formula for  $\text{KTaO}_3$  taught by *Kamiyama* is taken to be accurate, with a 'd' value [representing oxygen deficiency] of 0." While applicant disagrees with this interpretation of *Kamiyama*, applicant has amended all of the pending claims to recite that the oxygen deficiency of the  $\text{KTaO}_3$  in the claimed optical devices is between  $10^{-8}$  and  $10^{-7}$  (i.e., that the oxygen deficiency has a lower limit of  $10^{-8}$  and therefore is not zero.) As a result, based on the Examiner's interpretation of *Kamiyama* Applicant submits that *Kamiyama* does not teach or suggest the claimed oxygen deficiency. Furthermore, Applicant submits that none of the other cited references cure this deficiency of *Kamiyama*. Accordingly, Applicant respectfully requests that the obviousness rejection with respect to claims 2, 6, and 11 be withdrawn.

No other objections or rejections are set forth in the Office Action.

D. Conclusion

Applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited art. Most notably, applicant submits that many if not all of the dependent claims are independently distinguishable over the cited art. Applicant has merely submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited art.

In view of the foregoing, applicant respectfully requests the Examiner's reconsideration and allowance of claims 2, 6, and 11 as amended and presented herein.

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefor and charge any additional fees that may be required to Deposit Account No. 23-3178.

In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Dated this 18th day of September 2009.

Respectfully submitted,

/Scott A. Woodbury/ Reg. #55743

SCOTT A. WOODBURY

Registration No. 55,743

DANA L. TANGREN

Registration No. 37,246

Attorneys for Applicant

Customer No. 022913

Telephone No. 801.533.9800

SAW:cad

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